NOVA SCOTIA

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Nova Scotia Farm Management

Analysis Project

Business Management and Economic Development Services
Nova Scotia Department of Agriculture and Fisheries

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NOVA SCOTIA FARM MANAGEMENT ANALYSIS PROJECT

The Nova Scotia Farm Management Analysis Project, or **FMAP**, is designed to assist Nova Scotia farm managers develop their business management knowledge and skills.

FMAP provides farm managers with a farm planning tool from which data is gathered. The compiled data gives a comparative analysis with similar farm businesses as well as a complete financial and production summary of their own business. A year-to-year analysis of business performance improves the farm manager's ability to recognize and react to opportunities resulting from change.

In 2002, 163 individual farm businesses participated in the Farm Management Analysis Project. Participants ranged from smaller part-time businesses to large multi enterprise farms.

At present, the FMAP is available to all Nova Scotia dairy, hog, beef, mink, tree fruit, honey and blueberry producers.

For further information, contact the Business Management & Economics Office at (902)-893-6580.

Formulas Used To Calculate Financial Analysis

1. **Liquidity**

Current Ratio = Current Assets ÷ Current Liabilities

- The current ratio measures the business' ability to meet financial obligations as they come due without disrupting normal operations.
- If the ratio is greater than 1, the business is considered to be liquid. A ratio of less than 1 may indicate a potential liquidity problem.

Working Capital = Current Assets - Current Liabilities

- Working capital is the cash available to the business to meet financial obligations as they come due without disrupting normal operations.

2. **Solvency**

Percent Equity = Owner's Equity ÷ Total Assets x 100%

- Percent Equity is a measure of the owner's equity in the business. It measures the proportion of total assets financed by the owner of the business. A higher percentage indicates lower financial risk.

Debt to Equity = Total Liabilities + Owner's Equity

- The debt to equity ratio is a measure of the extent to which creditors have financed the business compared to the owners. The higher the value of the ratio, the greater the proportion of financing that has been provided by creditors.

3. **Profitability**

Return on Assets = (Net Income + Interest - Value of Operator and Unpaid Family Labour) x 10 ÷ Average Total Assets for the Period

- Return on assets shows the business' ability to earn a return on its total assets. The higher the value, the greater the return on assets. The value of operator and unpaid family labour reflects the value in the local marketplace for similar work. This was assumed to be $8.hr.

Return on Equity = (Net Income - Value of Operator and Unpaid Family Labour) x 100% ÷ Average Owner Equity

- Return on equity provides a measure of the return to the owner on his/her investment in the business. The higher the percentage, the greater the return on equity.

Capital Turnover = Revenue ÷ Total Assets

- This ratio indicates the extent to which a business utilizes its assets to generate revenue. A high ratio indicates efficient use of assets.

4. **Financial Efficiency**

Contribution Margin = Contribution Margin x 100% ÷ Revenue

The contribution margin percentage measures the financial efficiency of the business in terms of funds generated directly from operations. The higher the ratio, the more efficient the business.

Capital Replacement, Personal Exemption & Debt Servicing Margin = Net Income + Interest on Term Debt + Depreciation

This amount represents the dollars generated from operations that are viable to cover capital replacement, withdrawals for personal living expenses, and to make annual payments on all debt.

Beef
Farm Business
Management
Analysis

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Income Statement
Average 29 Farms

	Total	$ Per Cow
REVENUE		
Calves Sold	$26,710	$484.43
Finished Cattle Sales	3,825	69.37
Breeding Stock	2,761	50.07
Other Livestock - Culls	4,551	82.53
Custom Work	2,771	50.26
Crop Sales	1,133	20.54
Government Assistance	3,320	60.22
NISA Income	1,358	24.64
Other Income	5,912	107.21
INVENTORY ADJUSTMENT	4,690	85.07
TOTAL REVENUE	$57,031	$1,034.33
OPERATING EXPENSES		
Forages Purchased	$1,134.00	$20.57
Grain Purchased	2,633.00	47.75
Salt & Mineral	336.00	6.10
Cropping Expense	6,029.00	109.34
Livestock Purchases	3,242.00	58.81
Vet & Medicine	1,987.00	36.04
Breeding	159.00	2.89
Equipment R&M	6.967.00	126.35
Motor Vehicle	1,892.00	34.31
Building/Fence Repairs	1,514.00	27.46
Custom Work	2,932.00	53.17
Custom Trucking	474.00	8.60
Marketing	338.00	6.13
Hired Labour	2,765.00	50.15
Farm Supplies / Small Tools	929.00	16.85
Legal/Accounting/Office	721.00	13.07
Utilities	1,084.00	19.65
Short Term Interest	1,274.00	23.11
Misc.	1,391.00	25.23
TOTAL OPERATING EXPENSES	$37,802.00	$685.58
OPERATING MARGIN	$19,229.00	$348.74
FIXED EXPENSES		
Insurance	$1,478.00	$26.81
Taxes/Rent	3,080.00	55.85
Long Term Interest	2,831.00	51.35
Depreciation: Buildings	1,415.00	25.66
Depreciation: Machinery & Equipment	8,752.00	158.73
TOTAL FIXED EXPENSES	$17,556.00	$318.41
TOTAL EXPENSES	$55,358.00	$1,003.99
NET INCOME (LOSS)	$1,672.55	$30.33

Breakeven Analysis

Cattle Crop Sold (Note 1)	Weight (Ave. Lbs Live Wt/Hd)	Number (Hd)	Selling Price ($/lb)
Calves	654	36	1.15
Finished Cattle	1,266	3	0.96
Other Cattle	1,063	6	0.68
Average	754	45	1.03

Inventory Adjustment	Beginning #	Ending #	Change
Calves	32	33	1
Finished Cattle	3	3	0
Cows	54	56	2
Replacement Heifer	9	9	0
Bulls	2	2	0
Total $ Value	$83,068	$87,758	$4,690
Return on Cattle Investment (Note 2)		**1.9%**	

Breakeven Prices	$/Lb.
On Total Beef Costs	1.56
On Operating Costs	0.99

Note 1: Selling Prices are calculated as: $\frac{\text{Livestock Sold - \$}}{\text{Selling wt - lbs}}$

Note 2: Return on Investment is calculated as: $\frac{\text{Net Income}}{\text{Ending Inventory}}$

Management Analysis

(A) Production Analysis		2002 Average
Calving Percentage	(%)	100.8
Culling Rate	(%)	9.3
Lbs Weaned Calf Produced per Cow	(lbs/cow)	595.8

(B) Financial Analysis		2002 Average
Feed Expense Per Lb. Sold	($/lb)	0.28
Total Revenue Per Weaned Calf	($/hd)	$1,105.54
Total Expenses per Weaned Calf	($/hd)	$1,073.12
Capital Replacement, Personal Exp & Debt Servicing Margin (Note 1)	($)	$14,670.89
Fixed Expenses as a Percent of Total Revenue	(%)	30.8
Variable Expenses as a Percent of Total Revenue	(%)	66.3
All Interest Expenses as % of Total Revenue	(%)	7.2
Contribution Margin % (Note 2)	(%)	33.7

Note 1: **Capital Replace., Personal Exp. & Debt Servicing Margin =**
Net Income + Long Term Interest + Depreciation

*This amount represents the dollars generated from operations that are available to cover capital replacement, withdrawals for personal living expenses, and to make annual payments on all debt.

Note 2: **Contribution Margin % = $\frac{\text{Operating Margin}}{\text{Total Revenue}}$ x 100%**

*This contribution margin percentage measures the financial efficiency of the business in terms of funds generated directly from operations. The higher the ratio, the more efficient the business.

Crop Production

	All Farms Per Acre Cropland
Total Crop Costs	$22.36
Machinery and Repair Costs	$25.84
Depreciation - Machinery	$32.46
Cows	0.20
Calf Weight Gain in lbs	86.42

Blueberry Farm Business Management Analysis

Balance Sheet

	2002	2001
Assets		
Current Assets		
Cash	$184	$3,814
Blueberry Sales Receivable	0	0
Other Accounts Receivable	3,150	11,878
Inventory (Note 1)	766	671
Other Current Assets	0	11,195
Total Current Assets	$4,100	$27,558
Capital Assets		
Blueberry Land	$44,093	$166,791
Other Land	14,286	27,800
Buildings (Note 2)	7,811	12,544
Machinery (Note 2)	1,972	31,882
Equipment (Note 2)	0	19,383
Other Fixed Assets	10,154	10,702
Total Long Term Assets	$78,315	$269,102
Total Assets	$82,415	$296,660
Liabilities and Owner's Equity		
Current Liabilities	$15,658	$25,789
Long Term Liabilities	23,936	63,413
Total Liabilities	$39,593	$89,203
Owner's Equity	$42,822	$207,458

Total Assets	Per Acre*	112.64
	Per Pound	1.14
Total Liabilities	Per Acre*	534.53
	Per Pound	0.55
Fixed Expenses	% of Total Cost	18.95
Variable Expenses	% of Total Cost	81.05

* Total Acres of Land in Blueberry Production

Note 1: Inventory includes fertilizer, sprays and chemicals and other supplies carried over at the end of December.

Note 2: Land is valued at its original cost. All depreciable assets are valued at cost less accumulated depreciation or book values. The book values are taken from the Capital Cost Allowance (CCA) schedules in the income tax returns.

Statement of Income and Expenses

Average - 5 Farms

Revenue	Total	Per Pound	% of Revenue
Total Blueberry Sales	$33,030	$0.457	84.17
Crop Insurance	0	0.000	0.00
Grants & Subsidies	3,211	0.044	8.18
Custom Work	1,175	0.016	3.00
Other Blueberry Revenue		0.000	0.00
Other Crop Income	0	0.000	0.00
Revenue from Development	1,327	0.018	3.38
Misc. Non-Blueberry Revenue	402	0.006	1.03
			2.98
Total Farm Revenue	$39,147	0.542	99.76
Plus: Inventory Change	95	0.01	0.24
Gross Farm Revenue	$39,241	$0.543	100.00
Operating Expenses	**Total**	**Per Pound**	**% of Operating**
Berries Purchased for Resale	$338	$0.005	0.86
Labor Expense	10,099	0.140	25.74
Custom Work Expense	5,709	0.079	14.55
Land Development Expense	1,459	0.020	3.72
Marketing Expense	0	0.000	0.00
Supplies	19	0.000	0.05
Sprays & Chemicals	1,011	0.014	2.58
Fertilizer & Lime	324	0.004	0.83
Pollination	2,254	0.031	5.74
Packaging Material & Printing	1,361	0.019	3.47
Fuel - Diesel/Gas/Lube	739	0.010	1.88
Tractor & Machinery	1,614	0.022	4.11
Truck & Vehicle	319	0.004	0.81
Building Repairs	0	0.000	0.00
Professional Fees	860	0.012	2.19
Crop Insurance	88	0.001	0.22
Office Expenses/Fees	191	0.003	0.49
Utilities	1,417	0.020	3.61
Interest on Operating	157	0.002	0.40
Misc. Blueberry Expense	439	0.006	1.12
Misc. Non-Blueberry Expense	0	0.000	0.00
Total Operating Expenses	$28,397	$0.393	72.36
Fixed Expenses	**Total**	**Per Pound**	**% of Fixed**
Rentals & Leases	$1,497	$0.021	3.82
Insurance	667	0.009	1.70
Property Taxes	417	0.006	1.06
Term Interest	946	0.013	2.41
Depreciation - Buildings	354	0.005	0.90
Depreciation - Machinery	845	0.012	2.15
Depreciation - Equipment	1,913	0.026	4.87
Total Fixed Expenses	$6,639	$0.092	16.92
Net Farm Income (Loss)	$4,206	$0.058	10.72

Production Management

(A) Production Summary	Totals	
Total Acres	96	
Harvested Acres	32.90	
Total Berries Harvested (Pounds)	71,678	
Pounds of Berries Sold/Acre Harvested	2,196	
(B) Custom Work	**$/Pound**	**% of Total**
Production	0.005	6.18
Harvesting	0.057	71.94
Packing	0.000	0.00
Land Development	0.016	20.63
Land Maintenance	0.001	1.25
(C) Labour Analysis		
Lbs. Berries / PE (1)	166,917	
Harvested Acres / PE	77	
Value of Hired Labour	$10,099	
Per Pound	0.14	
Value of Family Labour	$0	
Per Pound	0.00	
Value of Operator Labour	$2,534	
Per Pound	0.04	

(1) One P.E. (Person Equivalent) is equal to 2600 hours of labour per year, i.e. 50 hours per week times 52 weeks per year. One operator is assumed to be equal to one person equivalent.

(D) Net Cost of Producing Blueberries	
Total Cash Expenses	$31,923
Plus: Depreciation	3,112
Inventory Change	95
Interest on Equity (1)	2,674
Unpaid Family Labour (2)	0
Operator Labour	2,534
Less: Non-Blueberry Revenue (3)	402
Net Cost of Producing Blueberries	$39,936
Less: Blueberry Sales	$38,744
Net Return (Loss)	**($1,192)**
Net Return Per Pound of Harvested Berries	($0.02)

(1) Interest on equity is assumed to be 6%.
(2) The hourly wage calculated for hired labour is used to value family labour.
(3) Non-Blueberry Revenue is the total of other blueberry and non-blueberry revenue.

Financial Analysis

Financial Measure		2002
1. Liquidity		
Current Ratio		0.26
Working Capital		0
2. Solvency		
Debt to Asset Ratio	(%)	29.04
Debt to Equity Ratio	(%)	92.46
3. Profitability		
Return on Assets	(%)	3.06
Return on Equity	(%)	3.75
4. Financial Efficiency		
Interest as % of Revenue	(%)	0.03
Capital Replace., Personal Exp. & Debt Servicing Margin	($)	$8,264

Dairy
Farm Business
Management
Analysis

Income Statement
Average - 79 Farms

	Total	Per Cow	Per HL
REVENUE	$315,623	$4,733	$58.02
Milk Sales	868	13	0.16
Milk Subsidies	27,408	411	5.04
Livestock Sales - Dairy	2,648	40	0.49
Livestock Sales - Other	7,117	107	1.31
Crop Sales	5,198	78	0.96
Grants and Subsidies	4,143	62	0.76
Custom Work	7,543	113	1.39
Miscellaneous	6,792	102	1.25
Miscellaneous (Non Dairy)			
TOTAL REVENUE	$377,339	$5,658	$69.36
Plus: Inventory Change	3,654	55	0.67
GROSS FARM REVENUE	$380,993	$5,713	$70.03
OPERATING EXPENSES	$64,108	$961	$11.78
Feed & Supplements	16,612	249	3.05
Crop Expense	4,559	68	0.84
Livestock Purchases	12,249	184	2.25
Milk Hauling	7,590	114	1.40
Milk Marketing Costs	7,758	116	1.43
Vet and Medicine	5,503	83	1.01
Breeding & Breeding Embryo	12,887	193	2.37
Dairy Supplies & Services	5,761	86	1.06
Truck & Auto Expense	18,670	280	3.43
Tractor & Machinery Repairs	8,781	132	1.61
Building & Fence Repairs	2,751	41	0.51
Operating Interest	7,789	117	1.43
Custom Work	37,840	567	6.96
Hired Labour	7,979	120	1.47
Utilities	8,514	128	1.57
Miscellaneous	2,031	30	0.37
Miscellaneous (Non Dairy)			
TOTAL OPERATING EXPENSES	$231,382	$3,470	$42.53
NET OPERATING INCOME	$149,611	$2,243	$27.50
FIXED EXPENSES	$7,968	$119	$1.46
Rentals & Leases	9,449	142	1.74
Insurance & Taxes	38,866	583	7.14
Interest	36,041	541	6.62
Depreciation			
TOTAL FIXED EXPENSES	$92,323	$1,384	$16.97
NET INCOME (LOSS)	$57,288	$859	$10.53

Balance Sheet

		2002
CURRENT ASSETS		
Cash		$1,338
Accounts Receivable		12,759
Inventory (Note 1)		
Livestock	156,872	
Crops and Supplies	41,635	198,507
TOTAL CURRENT ASSETS		$212,604
LONG TERM ASSETS		
Machinery & Equipment (Note 2)		$114,508
Buildings (Note 2)		105,385
Land (Note 2)		153,666
Milk Quota		472,660
Co-op Dairy Investment		58,686
Other Farm Assets		8,746
NISA Investments		5,828
TOTAL LONG TERM ASSETS		$919,479
TOTAL ASSETS		$1,132,083
LIABILITIES AND OWNERS' EQUITY		
CURRENT LIABILITIES		$61,797
LONG TERM LIABILITIES		575,015
TOTAL LIABILITIES		$636,812
OWNERS' EQUITY		$495,271
TOTAL LIABILITIES AND OWNERS' EQUITY		$1,132,083

		All Farms	Top 25%
Total Assets			
Per Cow	($)	$16,975	$15,641
Per Kg. of Quota	($)	$20,861	$18,772
Per HL Shipped	($)	$208	$177
Total Liabilities			
Per Cow	($)	$9,549	$8,125
Per Kg. of Quota	($)	$11,735	$9,751
Per HL Shipped	($)	$117	$92
Fixed Expenses as % of Total Cost	(%)	28.5%	25.7%
Variable Expenses as % of Total Cost	(%)	71.5%	74.3%

(1) Livestock inventory includes all breeding stock, market livestock and animals retained for replacements. Crops and supplies inventory includes all feed, fertilizer and supplies. Inventory values are based on an estimate of Fair Market.

(2) Land is valued at its original cost. All depreciable assets are valued at cost less accumulated depreciation or book value. The book values are taken from the Capital Cost Allowance (CCA) schedules in the income tax returns.

Financial Analysis

Financial Measure		2002
1. Liquidity:		
Current Ratio		3.4
Working Capital	($)	150,808
2. Solvency:		44%
Percent Equity	(%)	1.3
Debt to Equity Ratio		
3. Profitability		
Return on Assets	(%)	5.0
Return on Equity	(%)	3.5
Capital Turnover	(Times/Yr)	0.3
4. Financial Efficiency		
Interest as % of Revenue	(%)	10
Contribution Margin	(%)	39
Capital Replace., Personal Exp. & Debt Servicing Margin	($)	105,458

Crop Expense Analysis

Item	All Farms Cost/Acre	2002 Top 25% Cost/Acre
Seed	$11.45	$13.18
Spray	6.06	10.86
Fertilizer	27.91	29.58
Other	7.64	6.57
Total Cropping Cost	**$52.28**	**$60.20**

Acres Harvested

Item	All Farms Acres/Cow	2002 Top 25% Acres/Cow
Forage Acres	2.88	2.41
Corn Silage Acres	0.27	0.33
Corn Grain Acres	0.30	0.56
Cereal Acres	0.35	0.47
Protein Acres	0.12	0.24
Other Acres	0.04	0.08
Pasture	0.81	0.52
Total Acres	**4.76**	**4.60**

Management Analysis

		All Farms		Top 25%	
(A) Sales Analysis					
In Quota Milk Price / HL	($/HL)	59.63		58.94	
OEP Milk Price / HL	($/HL)	18.89		18.38	
World Milk Price / HL	($/HL)	11.77		12.15	
Blended Price / HL	($/HL)	$58.02		56.60	
In Quota Milk - % of Total Shipped	(%)	96.1		94.3	
OEP Milk - % of Total Shipped	(%)	3.4		5.3	
World Milk - % of Total Shipped	(%)	0.5		0.5	
Milk Sold per KG Quota Holdings	($/KG)	5,816		6,008	
Litres Sold per KG Quota Holdings	(L/KG)	10,025		10,616	
(B) Production Analysis					
Average # of Cows	(Hd)	67		80	
Milk Sold per Farm	(HL)	5,440		7,087	
Milk Sold per Cow	(L)	8,157		8,845	
Kg. Quota Holdings per Cow	(Kg./Cow)	0.81		0.83	
Kgs. Of Butterfat produced	(Kg)	20,650		26,248	
Kgs. Of Butterfat per Cow	(Kg./Cow)	310		328	
Kgs. Of Protein Produced	(Kg)	17,873		23,044	
Kgs. Of Protein per Cow	(Kg./Cow)	268		288	
Ratio Replacements to Cows	(Replacements/Cows)	0.86		0.95	
Years Farming	(Yrs.)	21		21	
(C) Net Cost of Producing Milk					
Total Cash Expenses	($)	287,665		342,040	
Depreciation	($)	36,041		37,557	
Inventory Change	($)	(3,654)		(11,972)	
Interest on Equity (1)	($)	24,067		30,073	
Unpaid Family Labour	($)	6,266		3,450	
Operator Labour (2)	($)	34,405		33,600	
Less: Sales (Excl. Milk)	($)	60,848		84,629	
Net Cost of Producing Milk	($)	323,941		350,120	
Less: Milk Receipts	($)	316,490		402,202	
Net Return	($)	(7,451)		52,082	
Net Cost per HL of Milk	($/HL)	59.55		49.40	
Net cost per KG of BF	($/KG)	15.69		13.34	
(D) Expense Analysis		Per Cow	Per HL	Per Cow	Per HL
Feed Expense	($)	961	11.78	935	10.57
Crop Expense	($)	249	3.05	277	3.13
Machinery Expense (Excluding Depreciation)	($)	280	3.43	266	3.01
Total Feed & Crop Expense	($)	1,490	18.27	1,479	16.72
(E) Labour Analysis					
Hired Labour	(PE's)	1.2		1.8	
Unpaid Family Labour	(PE's)	0.2		0.1	
Number of Operators (3)	(PE's)	1.1		1.1	
Total Labour Units	(PE's)	2.6		3.0	
Hired Labour Expense	($/Hr)	11.86		11.18	
Total Hired Labour Expenses	($)	37,840		52,261	
Cows per PE (3)	(Hd)	26		26	
Milk Sold per PE	(HL/PE)	2,107		2,336	

1.Interest on equity is assumed to be 5%.

2.A standard figure of $21,000. for one P.E. per year is used.

3.One P.E. (Person Equivalent) is equal to 2600 hours of labour per year, i.e. 50 hours per week times 52 weeks per year. One operator was assumed to be equal to one person equivalent.

Management Factors (By Farm Size)

Item		Farms <50 Cows	Farms 50-80 Cows	Farms >80 Cows
Production Analysis				
Average Number of Cows	(hd)	39	62	110
Milk Sold per Farm	(HL)	3,103	4,969	9,255
Milk Sold per Cow	(L)	7,938	8,003	8,402
Kgs of Butterfat Produced per Farm	(kg)	11,888	18,598	35,428
Kgs of Butterfat Produced per Cow	(kg)	304	300	322
Average Kgs Shipped per Day	(kg/day)	33	51	97
Investment Analysis				
Average Investment per Cow				
Current Assets	($)	3,546	2,991	3,218
Machinery and Equipment	($)	1,771	1,545	1,939
Buildings	($)	1,296	1,498	1,973
Land	($)	2,094	2,403	2,318
Milk Quota	($)	4,808	6,887	8,352
Co-op Dairy Investment	($)	897	904	854
Other Farm Assets	($)	75	154	137
NISA Investments	($)	55	70	119
Total Invested Capital Per Cow		14,542	16,452	18,908
Total Liabilities per Cow	($)	8,044	8,959	10,828
Owners' Equity per Cow	($)	6,498	7,494	8,080
Return on Invested Capital	(%)	1.0	5.5	5.9
Return on Owners' Equity	(%)	0	4.4	5.7
Labour Analysis				
Hired Labour	(PE's)	0.6	1.1	2.2
Unpaid Family Labour	(PE's)	0.2	0.1	0.3
Number of Operators	(PE's)	1.1	1.1	1.2
Total Labour Units	(PE's)	1.9	2.4	3.8
Hired Labour Expenses	($/hr)	12.17	11.14	12.33
Total Hired Labour Expenses	($)	19,477	31,664	71,904
Cows per PE	(hd)	20	26	29
Milk Sold per PE	(HL/PE)	1,606	2,091	2,457

Management Factors		2002 79 Farms	2001 78 Farms	2000 74 Farms	1999 63 Farms
Cows per Farm	(#)	67	67	70	60
Milk Sold per Farm	(HL)	5,440	5,496	5,712	4,882
Milk Sold per Cow	(L)	8,157	8,237	8,147	8,085
Milk Sold per Cow	($)	4,733	4,779	4,529	4,542
Purchased Feed per Cow	($)	961	960	878	863
Purchased Feed per HL Milk Sold	($)	11.78	11.65	10.78	10.67
Crop Expenses per HL Milk Sold	($)	3.05	3.26	3.51	3.80
Machinery Expense per HL Milk Sold	($)	3.43	3.68	3.71	3.35
Total Feed & Crop Expense per HL	($)	18.26	18.59	18.00	17.81
Hired Labour - Person Equivalents	(#)	1.2	1.1	1.2	0.9
Operator & Family Labour - Person Equivalents	(#)	1.3	1.4	1.5	1.3
Milk Sold per Person Equivalent	(HL)	2,107	2,160	2,130	1,990
Cows per Person Equivalent	(#)	26	26	26	25
Total Farm Income	($)	380,993	408,782	410,473	345,495
Total Farm Expense	($)	323,705	322,807	328,046	278,506
Net Farm Income	($)	57,288	85,975	82,428	66,989
Total Farm Income in $/HL	($)	70.03	74.38	71.86	70.77
Total Farm Expense in $/HL	($)	59.50	58.74	57.43	57.05
Net Farm Income in $/HL	($)	10.53	15.64	14.43	13.72
Net Farm Income as % of Sales	(%)	15.03	21.03	20.08	19.40
Variable Cost as % of Total Sales	(%)	60.73	57.47	57.52	57.10
Fixed Cost as % of Total Sales	(%)	24.23	21.49	22.40	23.50
Total Assets	($)	1,132,083	1,085,248	1,065,901	852,100
Total Liabilities	($)	636,812	646,239	670,758	536,471
Total Equity	($)	495,271	439,009	395,143	315,629
Equity in Farm Business	(%)	44	40	37	37
Return on Equity	(%)	3.5	13.4	13.6	11.2
Return on Assets	(%)	5.0	9.0	8.9	8.03
Capital Turnover	(YRS)	0.3	0.4	0.4	0.4
Total Assets per HL	($/HL)	208	197	187	175
Liabilities per HL	($/HL)	117	118	117	110
Operating Expense Ratio	(%)	61	61	61	61
Total Liabilities/Gross Revenue		1.7	1.6	1.6	1.6
Cost Control (Net Income/Total Expenses)	(%)	18	21	20	19.0
Degree of Leverage (Contribution Margin/Fixed Expenses)		1.6	2.0	1.9	1.80
Working Capital	($)	150,808	130,758	130,670	110,562
Current Assets/Current Liabilities		3.4	2.7	3.2	3.4
Total Assets/Total Liabilities		1.8	1.7	1.6	1.6
Debt/Equity		1.3	1.5	1.7	1.7

Honey Farm Business Management Analysis

Statement of Income and Expenses

Average - 4 Farms

Revenue	Total	Per Hive	Per Pound Honey
Honey Sales	$62,649	$126.82	$1.79
Pollination	37,015	74.93	1.06
Wax Sales	1,687	3.42	0.05
Subsidies and Assistance	5,308	10.75	0.15
Other Bee Related Income	7,308	14.79	0.21
Miscellaneous Income (Non-Bee)	7,316	14.81	0.21
Total Farm Revenue	$121,283	$245.51	$3.47
Plus: Inventory Change	17,123	34.66	0.49
Gross Farm Revenue	$138,406	$280.17	$3.96
Variable Expenses			
Honey Containers and Labels	$6,882	$13.93	$0.20
Super Maintenance	1,271	2.57	0.04
Queen Bee Purchases	7,846	15.88	0.22
Wax Purchases	297	0.60	0.01
Custom Work	571	1.16	0.02
Honey Purchases	6,322	12.80	0.18
Medication	4,600	9.31	0.13
Sugar	4,590	9.29	0.13
Pollen & Substitute Purchases	9	0.02	0.00
Shop Supplies	2,102	4.26	0.06
Hired Labour	11,913	24.12	0.34
Truck Expenses & Repairs	5,755	11.65	0.16
Tractor Expenses & Repairs	1,657	3.35	0.05
Processing Equipment Maintenance	576	1.17	0.02
Fuel	2,676	5.42	0.08
Building Repairs	1,753	3.55	0.05
Professional Fees	1,107	2.24	0.03
Office Expenses/Fees & Licences	1,325	2.68	0.04
Utilities	1,536	3.11	0.04
Operating Interest	1,936	3.92	0.06
Miscellaneous Expenses-Bee Related	1,679	3.40	0.05
Miscellaneous Expenses-Non-Bee	6,075	12.30	0.17
Total Variable Expenses	$72,479	$146.72	$2.08
Net Operating Income	$65,928	$133.46	$1.89
Fixed Expenses			
Rentals & Lease Expenses	$50	$0.10	$0.00
Insurance	2,192	4.44	0.06
Property Taxes	408	0.83	0.01
Long Term Interest	4,426	8.96	0.13
Depreciation	15,082	30.53	0.43
Total Fixed Expenses	$22,159	$44.86	$0.63
Net Farm Income (Loss)	$43,769	$88.60	$1.25

Balance Sheet

	Beginning	Ending
Assets		
Current Assets		
Cash	-$2,290	-161
Accounts Receivable	3,754	4,752
Inventory	28,987	46,111
Total Current Assets	$30,451	$50,702
Capital Assets		
Land	$19,226	$18,530
Buildings	26,361	26,793
Machinery & Equipment	31,664	44,531
Bees & Equipment	66,301	71,807
Other Fixed Assets	4,440	301
Total Capital Assets	$147,992	$161,961
Total Assets	$178,443	$212,663
Liabilities and Owners Equity		
Current Liabilities	$21,120	$20,984
Long Term Liabilities	75,605	81,887
Total Liabilities	$96,725	$102,870
Owners Equity	$81,718	$109,792
Total Liabilities & Owners Equity	$178,443	$212,663

		Average
Total Assets	Per Hive	$395.86
	Per Pound Honey	$5.60
Total Liabilities	Per Hive	$202.02
	Per Pound Honey	$2.86
Fixed Expenses % of Total Cost		23.4%
Variable Expenses % of Total Cost		76.6%

Financial Analysis

Financial Measure	2002 Average
1. Liquidity	
Current Ratio	2.42
Working Capital	29,718
2. Solvency	
Debt to Asset Ratio	0.39
Debt to Equity Ratio	0.94
3. Profitability	
Return on Assets	4.8%
Return on Equity	5.3%
Gross Margin Ratio	0.6
4. Financial Efficiency	
Interest as % of Revenue	0.05
Capital Replace., Personal Exp. & Debt Servicing Margin	$63,278

Production Analysis **(A) Net Cost of Producing Honey**		**Average**
Total cash Expenses (1)		$73,232
Plus: Depreciation		15,082
Inventory Change		17,123
Interest on Equity (2)		4,788
Unpaid Family Labour (3)		3,406
Operator Labour (4)		35,315
Less: Non-Bee Revenue		7,316
Net Cost of Operating		$141,631
Less: Bee Revenue		$131,091
Net Return (loss)		-$10,541
Net Return (loss)	**Per Hive**	-$21.34
	Per Pound Honey	-$0.30

2002 Honey Farm Business Analysis

Production Analysis cont'd		
(B) Labour Analysis		**2002 Average**
Total PE (person equivalents)		1.65
Pounds of Honey/PE		21,118
# Hives		299
Value of Hired Labour	$	11,913
	Per hive	24.12
	Per pound Honey	0.34
Value of Family Labour	$	3,406
	Per hive	6.89
	Per pound honey	0.10
Value of Operator Labour	$	35,315
	Per hive	71.49
	Per pound honey	1.01
(C) Production Summary		**2002 Average**
Average # hives for the year		494
Total lbs of honey produced		34,908
Total lbs of honey produced/honey producing hive		76.3
Total lbs of honey produced/hive		70.7

(1) Total cash expenses exclude honey purchases.
(2) Interest on equity is assumed to be 5%.
(3) A standard figure of $26,000 for one PE per year is used. One PE (person equivalent) is equal to 2600 hours of labour per year, i.e. 50 hours per week times 52 weeks per year.
(4) A standard figure of $35,000 for one PE per year is used.

Mink Farm Business Management Analysis

Income Statement
Average - 6 Farms

	Total	Per Breeding Female*	Per Mink Produced**
REVENUE			
Pelt Sales (Note 1)	$780,450	$169.64	$44.78
Breeding Stock	8,708	1.89	0.50
Other Mink Sold	0	0.00	0.00
Feed Sales	14,815	3.22	0.85
Subsidies	16,469	3.58	0.94
Miscellaneous	9,153	1.99	0.53
Adjustment for Inventory Change	131,948	28.68	7.57
TOTAL REVENUE	$961,543	$209.00	$55.17
VARIABLE COSTS			
Breeding Stock Purchases	$ 82,473	$17.93	$4.73
Other Mink Purchased	0	0.00	0.00
Feed & Supplements	228,456	49.66	13.11
Vet & Medicine	24,312	5.28	1.39
Supplies	17,712	3.85	1.02
Marketing	49,664	10.80	2.85
On-Farm Pelting	0	0.00	0.00
Custom Pelting	54,600	11.87	3.13
Hired Labour (Non-Pelting)	224,535	48.81	12.88
Truck & Machinery - Fuel & Repairs	30,739	6.68	1.76
Building Repairs	6,523	1.42	0.37
Utilities	7,148	1.55	0.41
Interest on Operating Loans	8,911	1.94	0.51
Other Cash Operating Costs	50,529	10.98	2.90
TOTAL VARIABLE COSTS	$785,602	$170.76	$45.07
CONTRIBUTION MARGIN (Note 2)	$175,941	$38.24	$10.09
FIXED COSTS			
Term Leases & Rentals	0	0.00	0.00
Insurance & Taxes	10,342	2.25	0.59
Interest on Long-Term Debt	9,883	2.15	0.57
Depreciation	39,200	8.52	2.25
TOTAL FIXED COSTS	$59,425	$12.92	$3.41
TOTAL COSTS	$845,026	$183.68	$48.48
NET INCOME (LOSS) (Note 3)	$116,517	$25.33	$6.68

* Number of females is determined by averaging the beginning and ending number of females.

** The number of mink produced equals total pelt sales + breeding stock sales + other mink sales + ending inventory of breeding stock and pelt carry over - beginning inventory of breeding stock and pelt carry over.

Note 1: All US dollars were converted into Canadian dollars using the actual exchange that the producer received at the time of payment.

Note 2: Contribution Margin: Total farm cash revenues less total farm variable costs. This is the amount available to cover fixed costs and profit.

Note 3: Net Income = Return to operator and unpaid family labour, management and equity capital.

Balance Sheet

ASSETS			
		2002	2001
CURRENT ASSETS			
Cash		$81,940	$74,140
Accounts Receivable (Note 1)		756,019	947,695
Inventory (Note 2)			
Mink, Pelts	0		
Feed	833	833	833
Other Current Assets		177,576	186,040
TOTAL CURRENT ASSETS		$1,016,368	$1,208,708
LONG TERM ASSETS			
Breeding Stock		$373,860	$241,912
Machinery & Equipment (Note 3)		96,515	75,548
Land, Buildings, and Pens (Note 3)		295,047	229,458
Other Fixed Assets		57,962	44,595
TOTAL LONG TERM ASSETS		$823,384	$591,512
TOTAL ASSETS		$1,839,752	$1,800,220
LIABILITIES AND OWNERS' EQUITY			
CURRENT LIABILITIES (Note 4)		$184,633	$235,277
LONG TERM LIABILITIES		187,811	130,108
TOTAL LIABILITIES		$372,444	$365,385
OWNERS' EQUITY		$1,467,308	$1,434,835
TOTAL LIABILITIES AND OWNERS' EQUITY		$1,839,752	$1,800,220

Note 1: For purposes of this study, current income and expenses are recorded on an accrual basis. The pelts which were produced in the current year are sold at the sale the following year. These pelts appear as income in the current year and as accounts receivable at the fiscal year end. When payment is received for the pelts, it is debited to the cash account with a corresponding reduction in accounts receivable.

Note 2: Livestock inventory includes all pelts that were carried over from the previous year. Crops and supplies inventory includes all feed, and supplies on hand at year-end. Inventory values are based on Fair Market Value at fiscal year end.

Note 3: All depreciable assets are valued at "cost less accumulated depreciation", or book. Land is valued at its original cost or acreage x $200. per acre.

Note 4: Current Liabilities include all debts that are due within one year, including the current portion of long term debt.

Financial Analysis

Financial Measure		2002	2001
1. Liquidity:			
Current Ratio		5.50	5.14
Working Capital	($)	831,735	973,430
2. Solvency:			
Percent Equity	(%)	79.8	79.7
Debt to Equity Ratio		0.25	0.25
3. Profitability:			
Return on Assets	(%)	6.4	18.2
Return on Equity	(%)	6.7	21.7
Capital Turnover	(Yrs)	1.91	1.76
4. Financial Efficiency:			
Interest as % of Revenue	(%)	1.95	3.80
Contribution Margin Ratio		0.18	0.37
Disposable Income	($)	33,651	$362,991
5. Miscellaneous Financial Analysis:			
Total Assets ($ per breeder female)		399.90	391.30
Total Liabilities ($ per breeder female)		80.96	79.42

Management Analysis

Livestock Production					
Pelts Sold	(#)	16,203	Pelts Produced per Female	(pl/hd)	3.8
Breeding Stock Sold	(hd)	142	Breeder Females Housed	(hd)	4,601
Other Mink Sold	(hd)	0	Breeder Males Housed	(hd)	1,020
Number of Pelt Sales per			Females per Male	(hd)	4.5
Breeder Female	(pl/hd)	3.5	Total Mink (Mature) Produced	(hd)	17,430

Labour Analysis					
Hired Labour Units (2)	(PE's)	5.3	Hired Labour Expense	($)	224,535
Unpaid Family Labour Units	(PE's)	0.0	Hired Labour Wage Rate	($/hr)	16.17
Number of Operators (3)	(PE's)	0.9			
Total Labour Units	(PE's)	6.3	Breeder Females Per Person		
Mink Produced per Person	(hd)	2,772	Equivalent	(hd)	732

Analysis of Sales

Average Price Of:			**Pelt Size As A Percentage of Total Pelts**		
				Male	Female
Dark Male Pelts	($)	51.57			
Dark Female Pelts	($)	44.71	(0/1)	48.0	5.5
All Dark Pelts	($)	48.39	2	5.0	8.1
Mutations	($)	40.89	3	0.6	26.5
Breeder Pelts	($)	40.29	4	0.2	5.1
			5	0.1	0.9
			Total	53.9	46.1

Pelt Quality				Male	Female
Male Pelts	(%)	53.2	Select Maj/BlGlama	55.6	53.4
Female Pelts	(%)	46.0	Majestic/Glama	14.7	13.7
Breeder Pelts	(%)	0.8	Mutations	4.0	3.7
Total	(%)	100.0	Standard/Low Grade	25.7	29.2
			Total	100.00	100.00

Net Cost of Production	Per Farm	Per Female	Per Mink Produced
Total Cash Expenses	$805,826	$175.16	$46.23
Plus: Depreciation	39,200	8.52	2.25
Inventory Change (Feed, Supplies)	0	0.00	0.00
Interest on Average Equity @ 6.0%	87,064	18.92	5.00
Unpaid Family Labour	667	0.14	0.04
Operator Labour	19,067	4.14	1.09
Less: Other Income	23,968	5.21	1.38
Net Cost of Producing Mink	$927,856	$201.68	$53.23

(1) The number of breeder males and the number of breeder females is determined by averaging the beginning and ending number of males or females kept for breeding.
(2) One P.E. or person equivalent is equal to 2600 hours of labour per year.
(3) One operator is equal to one person equivalent (1.0 P.E.).

Swine Farm Business Management Analysis

Farrow to Finish

Income Statement
Average - 14 Farms

REVENUE	Head Shipped	Total	Per Sow	Percent of Total Revenue
Market Hogs	4580	$611,297	$2,255.71	72.71
Weanlings	754	33,325	122.97	3.96
Gilts - Breeding Stock	195	61,923	228.50	7.36
Boars - Breeding Stock	4	5,248	19.37	0.62
Cull Sows	112	19,710	72.73	2.34
Cull Boars	5	314	1.16	0.04
Other Hogs	47	5,936	21.90	0.71
TOTAL HOG SALES		$737,753	$2,722.34	87.75
NISA/AIDA Programs		43,574	160.79	5.18
Other Assistance Programs		36,875	136.07	4.39
Other Income		29,358	108.33	3.49
TOTAL CURRENT INCOME		$847,560	$3,127.53	100.81
Value of Inventory Change		-6,781	-25.02	-0.81
TOTAL REVENUE		$840,779	$3,102.51	100.00
VARIABLE EXPENSES				
Feed Purchased		$469,556	$1,732.68	55.85
Swine Purchased		44,141	162.88	5.25
Hired Labour		80,372	296.58	9.56
Bedding		842	3.11	0.10
Vet and Drugs		13,991	51.63	1.66
Hog Supplies		5,879	21.69	0.70
Marketing Costs		7,486	27.62	0.89
Utilities		28,019	103.39	3.33
Truck & Machinery*		17,633	65.07	2.10
Auto Expense		12,640	46.64	1.50
Interest - Operating		6,098	22.50	0.73
Professional Fees		3,756	13.86	0.45
Miscellaneous		12,347	45.56	1.47
Other Non-Hog Expenses		9,727	35.89	1.16
TOTAL VARIABLE EXPENSES		$712,488	$2,629.11	84.74
CONTRIBUTION MARGIN		$128,291	$473.40	15.26
FIXED EXPENSES				
Leases and Rentals		1,027	3.79	0.12
Building & Equipment Repairs		22,371	82.55	2.66
Depreciation		47,914	176.81	5.70
Interest - Term Loans		44,571	164.47	5.30
Taxes		6,079	22.43	0.72
Insurance		8,934	32.97	1.06
TOTAL FIXED EXPENSES		$130,895	$483.01	15.57
TOTAL EXPENSES		**$843,383**	**$3,112.11**	**100.31**
NET FARM INCOME (LOSS)		-$2,604	-$9.61	-0.31

* Truck and Machinery includes the hog shipping charges.

Balance Sheet

ASSETS	Ending	Beginning
Current Assets		
Cash On Hand	$23,364	$23,966
Accounts Receivable	41,356	38,698
Inventory		
Production Livestock	171,050	173,799
Feed	8,591	11,514
Other Current Assets	8,659	11,183
TOTAL CURRENT ASSETS	$253,019	$259,160
Long Term Assets		
Breeding Livestock	$78,270	$79,378
Machinery & Equipment	85,276	98,046
Land & Buildings	459,090	459,524
Other Fixed Assets	107,374	109,309
TOTAL LONG TERM ASSETS	$730,010	$746,257
TOTAL ASSETS	$983,029	$1,005,417
TOTAL LIABILITIES AND OWNERS' EQUITY		
Current Liabilities	$155,298	$148,676
Long Term Liabilities	$554,351	$572,585
TOTAL LIABILITIES	$709,649	$721,261
Beginning Equity	$284,156	
+ Net Income	-2,604	
- Withdrawal's	-8,173	
OWNERS' EQUITY	$273,380	$284,156
TOTAL LIABILITIES AND OWNERS' EQUITY	$983,029	$1,005,417

Financial Analysis

Financial Measure	Ending	Beginning
1. **Liquidity:**		
Current Ratio	1.63	1.74
Working Capital	$97,721	$110,484
2. **Solvency:**		
Percent Equity	27.8%	28.3%
Debt/Equity Ratio	2.60	2.54
Assets per Sow	$3,627	
Debt per Sow	$2,619	
3. **Profitability:**		
Return on Assets	2.5%	
Return on Equity	—	
Capital Turnover	1.17	
4. **Financial Efficiency**		
Interest as % of Revenue	6.0%	
Contribution Margin	15.3%	

Production

(A) Cost of Production	Total	Per Sow
Total Farm Expenses	$843,383	$3,112.11
Plus: Adj. for Livestock Inventory Change	3,858	14.24
Less: Non Hog Expenses	9,727	35.89
Cull Sales	20,025	73.89
Hog Purchases	6,643	24.51
Total Costs	$810,846	$2,992.05
Total Kgs. of Pork Produced (L.W.)	525,574	
Average Cost of Production (L.W.)	$1.54	
Average Cost of Production (D.W.)	$1.98	

(B)Inventory Flow	Boars	Sows	Piglets	Production Stock*
Beginning Inventory	10	273	380	2,253
+ Purchases/Births	4	91	6,575	144
+ Transfers In		32		5,776
+ Transfers Out			5,776	32
- Sales	5	112		5,580
- Deaths		16	801	259
- Ending Inventory	10	268	379	2,197
Discrepancy	-1	0	0	105

(C) Livestock Production Analysis			
Farrowing Unit			
Pigs Born	7,193		
Pigs Born Alive	6,575	Pigs Weaned	5,776
Still Births (#)	618	Suckling Mortality (#)	801
Still Births (%)	8.6%	Suckling Mortality (%)	12.2%
Breeding Herd Performance		Average # of Boars	10.1
Number of Litters	615	Sows per Boar	26.7
Average Number of Sows	271	Pigs Born per Sow	26.5
Litters per Sow	2.27	Pigs Born Alive per Sow	24.3
Pigs Born Per Litter	11.7	Pigs Weaned per Sow	21.3
Pigs Born Alive/Litter	10.7	Sow Mortality	16
Pigs Weaned/Litter	9.4	Sow Cull Rate	41.2%
Pigs Marketed/Sow	20.5		
Weaner & Finishing Unit		**Inventory Discrepancy**	
Weaner & Feeder Hog Mortality		Number	105
Number	259	Percent	1.8%
Percent	4.4%		

* Production Stock includes Weaners, Feeders and Breeding Stock.

(D) Feed Usage Analysis		
Sow Ration Fed per Sow & Boar	(kgs)	1,137
Total Kgs. Of Pork Produced (L.W.)	(kgs)	525,574
Total Kgs. Of Feed Consumed		1,630,556
Feed Conversion - Creep, Starter & Grower		2.49
Feed Conversion - Total Feed (L.W.)		3.10

FARROWING UNIT (PER WEANER PIG TRANSFERRED TO FINISHING OR SOLD)			
	Kgs. Per Head	**Dollars Per Head**	**Cost Per Tonne Fed**
Creep	3.44	$2.35	$682.96
Starter	29.56	10.21	$345.43
Sow & Boar Feed	55.35	15.23	$275.08
Total Feed per Pig Weaned	88.35	27.79	
FINISHING UNIT (PER HOG MARKETED)			
Starter	4.26	1.47	$345.43
Grower	114.88	32.31	$281.23
Finisher	112.97	30.86	$273.20
Total Feed per Finished Hog	232.10	$64.64	
TOTAL FEED (FARROW TO FINISH)	320.46	$92.43	$288.42

(E) RISK MANAGEMENT ANALYSIS			
Market Hog Equivalents Calculation	Hd Shipped	MHE Factor	Market Hog Equivalents
Market Hogs Sold	4,580	1.00	4,580
Weaner Pigs Sold	754	0.33	251
Breeding Stock Sales	199	1.20	239
Culls & Other Sales	164	0.75	123
Total Market Hog Equivalents Produced			5,193
Calculation of Costs:			Per Market
Additional Costs		Total	Hog Equiv.
Total Farm Expenses		$843,383	$162.40
Plus: Adj. For Livestock Inv. Change		3,858	0.74
Less: Non-Hog Expenses		9,727	1.87
Total Costs		$837,514	$161.27
Less: Feed Expenses		469,556	90.42
Total "Additional Costs" (Excl. Feed)		$367,958	$70.85
Return to Operator Labour:		Total	Man Equiv.
Operator Labour Rate per Person Equiv.		$35,000	$6.74
Operator Labour Person Equivalent		1.11	1.11
Value for Operator Labour Cost		$38,875	7.49
Feed Cost Calculation:			
Feed Conversion D.W.(Kgs Feed/Kgs Pork)		3.88	3.88
Average D.W. per Market Hog(kgs)		85.18	85.18
Total Feed per Market Hog(kgs)		330.32	330.32
Average Feed Cost per Tonne*		$289.91	$289.91
Feed Cost per Market Hog Equivalent *		$95.76	$95.76
Total Costs per Market Hog Equivalent			$174.10

* Feed Costs are based on feed expense for the entire year. The RMS calculation uses actual costs of feed ingredients as they occur each week.

Management Analysis

(F) Labour		
Labour Person Equivalents	(#)	3.66
Hogs Produced per Person (L.W.)	(Kgs)	143,571
Gross Farm Income per Person	($)	229,676
Sows Kept Per Person*	(#)	74
Total Pigs Produced per Person	(#)	1,518
Net Income per Operator	($)	-2,344

Market Analysis

(G) Market Analysis		
Ave. L.W. of Market Hogs Sold	(Kgs)	106.47
Average D.W. per Market Hog	(Kgs)	85.18
Average Carcass Grade Index		108.7
Average Market Price For Your Operation		$1.57
Market Return per Hog Marketed		$133.47
Total Return per Market Hog		$133.47
Weaner Price Received	(Per Weaner)	$44.23
Breeding Stock Sale Prices		
Gilts		$317.67

Swine Farm Business Management Analysis

Finishing

Income Statement
Average - 10 Farms

Revenue	Head Shipped	Total	Per Hog Marketed	Percent Of Total Revenue
Market Hogs	4,659	$619,185	$132.45	93.3
Other Hogs	16	1,225	0.26	0.2
TOTAL HOG SALES		620,410	132.71	93.5
NISA Programs		22,483	4.81	3.4
Other Assistance Programs		5,009	1.07	0.8
Other Income		18,488	3.95	2.8
TOTAL CURRENT INCOME		666,390	142.55	100.4
Value of Inventory Change		-2,690	-.58	-0.4
TOTAL REVENUE		$663,700	$141.97	100.0
VARIABLE EXPENSES				
Feed Purchased		$333,449	$71.33	50.2
Swine Purchased		199,070	42.58	30.0
Hired Labour		30,893	6.61	4.7
Bedding		530	0.11	0.1
Vet and Drugs		7,682	1.64	1.2
Hog Supplies		3,268	0.70	0.5
Marketing Costs		11,369	2.43	1.7
Utilities		9, 010	1.93	1.4
Machinery Expense		1,757	0.38	0.3
Auto Expense		3,586	0.77	0.5
Professional Fees		1,521	0.33	0.2
Lease & Rental		9,413	2.01	1.4
Interest - Operating		1,543	0.33	0.2
Miscellaneous		3,551	0.76	0.5
Other Non-Hog Expenses		10,942	2.34	1.6
TOTAL VARIABLE EXPENSES		$627,585	$134.25	94.6
CONTRIBUTION MARGIN		36,115	7.73	5.4
FIXED EXPENSES				
Building & Equipment Repairs		$10,538	$2.25	1.6
Depreciation		25,250	5.40	3.8
Interest - Term Loans		18,945	4.05	2.9
Taxes		2,369	0.51	0.4
Insurance		4,282	0.92	0.6
TOTAL FIXED EXPENSES		$61,384	$13.13	9.2
TOTAL EXPENSES		$688,969	$147.38	103.8
NET FARM INCOME (LOSS)		-$25,269	-$5.41	-3.8

Balance Sheet

Assets		Ending	Beginning
Current Assets			
Cash On Hand		$914	$921
Accounts Receivable		9,184	10,073
Inventory			
Livestock	$120,967		
Feed	28,224	149,191	152,683
Other Current Assets		18,520	18,676
TOTAL CURRENT ASSETS		$177,809	$182,353
Long Term Assets			
Machinery & Equipment		$58,292	$68,022
Land & Buildings		201,083	193,204
Other Fixed Assets		76,755	65,270
TOTAL LONG TERM ASSETS		$336,130	$326,495
TOTAL ASSETS		$513,939	$508,848
TOTAL LIABILITIES AND OWNERS' EQUITY			
Current Liabilities		87,571	91,470
Long Term Liabilities		331,480	317,939
TOTAL LIABILITIES		$419,051	$409,410
Beginning Equity		99, 439	
+ Net Income		-25,269	
- Withdrawals		20,719	
OWNERS' EQUITY		$94,888	$99,439
TOTAL LIABILITIES AND OWNERS' EQUITY		$513,939	$508,848

Financial Analysis

Financial Measure	Ending	Beginning
1. **Liquidity:**		
Current Ratio	2.03	1.99
Working Capital	$90,238	$90,883
2. **Solvency:**		
Percent Equity	18.5%	19.5%
Debt/Equity Ratio	4.4	4.1
Debt per Market Hog Equivalent	$89.33	
3. **Profitability:**		
Return on Assets*	n/a	
Return on Equity	-	
Capital Turnover	1.29	
4. **Financial Efficiency**		
Interest as % of Revenue	3.1%	
Contribution Margin	5.4%	

* Return on Assets = $\frac{\text{(Net Income + Interest - Unpaid Labour)}}{\text{Average Total Assets}}$

Production Analysis

(A) Cost Of Production	Total	Per Market Hog
Total Farm Expenses	$688,969	$148.58
Less: Other Income	10,942	2.36
Plus: Adj. for Inventory Change	2,690	0.58
Return on Owners' Equity (@5%)	4,858	1.05
Unpaid Operator & Family Labour	12,831	2.77
Total Costs	698,406	150.61
Total Kgs. of Pork Produced (Kgs. L.W.)	422,066	91.0
Average Cost of Production ($/Kg. D.W.)	$2.07	$2.07

(B) Market Analysis		
Ave. D.W. per Market Hog	(Kgs)	84.54
Average Carcass Grade Index	(Kgs)	109.7
Average Market Price for Your Operation	($/Kg)	$1.57
Market Return per Hog Marketed		$132.90
Total Return per Market Hog		$132.90
Average Total Return	($/Kg)	$1.57

(C) Feed Use		
Feed Cost/Kg Produced (L.W.)	($/Kg)	$0.78
Feed Cost/100 Kgs of Gain (D.W.)	($/100 Kg)	$97.70
Feed Cost/100 Kgs of Gain (L.W.)	($/100 Kg)	$78.16
Feed Conversion - Starter & Grower L.W.	(Feed/Gain)	2.72

	Kgs. Per Hog	Dollars Per Hog	Cost Per Tonne Fed
Starter Ration	35	$13.33	$380.12
Grower Ration	162	44.56	$275.08
Finisher Ration	51	13.25	$260.66
Total Feed	248	$71.14	

(D) Labour		
Labour Person Equivalents*	(#)	1.6
Operator & Family Labour Equiv.	(#)	0.6
Production per Person (L.W.)	(Kgs)	261,179
Gross Farm Income per Person	($)	410,706
Net Income per Operator & Family Labour	($)	-41,357
Market Hog Equivalents Per Person	(#)	2,869

* One PE (Person Equivalent) is equal to one full time person for one year.

(E) Inventory			
Purchases of Weaners	(Hd)	4,757	
Feeder Hog Mortality	(Hd)	161	3.48%
Inventory Discrepancy	(Hd)	4	
Market Hog Equivalents*	(Hd)	4,637	
Inventory Change	(Hd)	-75	
Market Hogs Sold	(Hd)	4,659	

* Note: Market Hog Equivalents = Market Hogs Sold + Other Hogs Sold
+ (Ending Inventory - Beginning Inventory) ÷ 2

Swine Farm Business Management Analysis

Sow-Weanling

Income Statement
Average - 4 Farms

Revenue	Head Shipped	Total	Per Sow	Per Weaner Produced
Weanlings	8,567	$372,707	$962.44	$43.50
Market Hogs	0	0	0.00	0.00
Cull Sows	169	31,822	82.17	3.71
Cull Boars	4	319	0.82	0.04
Other Hogs	2	282	0.73	0.03
TOTAL HOG SALES		$405,130	$1,046.17	$47.29
NISA Programs		29,591	76.41	3.45
Other Assistance Programs		10,621	27.43	1.24
Other Income		2,529	6.53	0.30
TOTAL CURRENT INCOME		$447,871	$1,156.54	$52.28
Value of Inventory Change		(8,898)	(22.98)	(1.04)
TOTAL REVENUE		$438,973	$1,133.56	$51.24
VARIABLE EXPENSES				
Feed Purchased		$155,249	$400.90	$18.12
Swine Purchased		67,268	173.71	7.85
Hired Labour		35,049	90.51	4.09
Bedding		1,437	3.71	0.17
Vet and Drugs		30,042	77.58	3.51
Hog Supplies		4,200	10.85	0.49
Marketing Costs		213	0.55	0.02
Utilities		16,098	41.57	1.88
Truck & Machinery Expense		2,966	7.66	0.35
Auto Expense		2,739	7.07	0.32
Interest - Operating		2,817	7.28	0.33
Miscellaneous		4,242	10.95	0.50
Other Non-Hog Expenses		0	0.00	0.00
TOTAL VARIABLE EXPENSES		$322,320	$832.33	$37.62
CONTRIBUTION MARGIN		$116,653	$301.23	$13.62
FIXED EXPENSES				
Rental / Lease / Custom Work		$3,095	$7.99	$0.36
Building & Equipment Repairs		8,000	20.66	0.93
Depreciation		43,700	112.85	5.10
Interest - Term Loans		34,344	88.69	4.01
Taxes		4,551	11.75	0.53
Insurance		3,689	9.53	0.43
TOTAL FIXED EXPENSES		$97,378	$251.46	$11.37
TOTAL EXPENSES		$419,697	$1,083.79	$48.99
NET FARM INCOME (LOSS)		$19,275	$49.77	$2.25

Balance Sheet

Assets		Ending	Beginning
Current Assets		$12,957	$29,411
Cash On Hand		14,742	10,186
Accounts Receivable			
Inventory			
Livestock	19,499		
Feed	1,544	21,043	31,016
Other Current Assets		4,613	6,683
TOTAL CURRENT ASSETS		$53,354	$77,296
Long Term Assets			
Breeding Livestock		$118,838	$117,763
Machinery & Equipment		83,887	92,564
Land & Buildings		372,889	378,221
Other Fixed Assets		41,783	41,482
TOTAL LONG TERM ASSETS		$617,397	$630,029
TOTAL ASSETS		$670,751	$707,324
TOTAL LIABILITIES AND OWNERS' EQUITY			
Current Liabilities		$21,411	$43,363
Long Term Liabilities		$532,691	$530,484
TOTAL LIABILITIES		$554,102	$573,846
Owners' Equity - Beginning		$133,478	
+ Net Income		19,275	
- Owners' Net Contributions (Withdrawals)		(36,104)	
OWNERS' EQUITY		$116,649	$133,478
TOTAL LIABILITIES AND OWNERS' EQUITY		$670,751	$707,324

Financial Analysis

Financial Measure	Ending	Beginning
1. **Liquidity:**		
Current Ratio	2.49	1.78
Working Capital	$31,944	$33,933
2. **Solvency:**		
Percent Equity	17.4%	18.9%
Debt/Equity Ratio	4.8	4.3
Assets per Sow	$1,717	$1,843
Debt per Sow	$1,418	$1,495
3. **Profitability:**		
Return on Assets	5.0%	
Return on Equity	---	
Capital Turnover	1.53	
4. **Financial Efficiency**		
Interest as % of Revenue	8.5%	
Contribution Margin	26.6%	

Production Analysis

(A) Cost Of Production	Total	Per Sow
Total Farm Expenses	$419,697	$1,083.79
Plus: Adj. for Lvstk. Inventory Change	6,413	16.56
Less: Cull Sales	32,142	83.00
Hog Purchases	0	0.00
Total Costs	$393,968	$1,017.35
Total Kgs. of Weaner Produced (Kgs. L.W.)	107,548	278
Average Cost of Production: Per Kilogram	$3.66	
Per Weaner	$46.75	

(B) Inventory Flow	Boars	Sows	Piglets	Production Stock*
Beginning Inventory	10	384	732	440
+ Purchases/Births	3	205	10,087	0
+ Transfers In		(12)		8,807
+ Transfers Out			8,807	(12)
- Sales	4	169		8,567
- Deaths		18	1,464	24
- Ending Inventory	8	391	548	310
Discrepancy	1	0	0	357

(C) Livestock Production Analysis			
Farrowing Unit			
Pigs Born	11,174		
Still Births (#)	1,087	Suckling Deaths	1,464
Still Births (%)	9.7%	Suckling Mortality	14.5%
Pigs Born Alive	10,087	Pigs Weaned	8,807
Breeding Herd Performance			
Number of Litters	901	Average # of Boars	9.0
Average Number of Sows	387	Sows per Boar	43.0
Litters per Sow	2.3	Sow Cull Rate	43.7%
Pigs Born per Litter	12.4	Born per Sow	28.9
Pigs Born Alive per Litter	11.2	Born Alive per Sow	26.0
Pigs Marketed per Sow	21.8	Weaned per Sow	22.7
Weaner & Finishing Unit			
Weaner & Feeder Hog Mortality		Inventory Discrepancy	
Number	24	Number	357
Percent	0.3%	Percent	4.2%

* Production Stock includes Weaners, Feeders and Breeding Stock.

(D) Livestock Analysis		
Average L.W. per Weanling Sold	(kg)	13.53
Market Return per Weaner	($)	43.50

(E) Labour		
Labour Person Equivalents	(#)	2.25
Weaners Produced Per Person	(Kgs)	47,799
Weaners Produced Per Person	(#)	3,746
Sows Kept Per Person*	(#)	172
Gross Farm Income Per Person	($)	195,099

* One PE (Person Equivalent) is equal to one full time person for one year.

(F) Feed Analysis			
Farrowing Unit (Per Weaner Pig Transferred to Finishing or Sold)			
	Kgs	**Dollars**	**Per Tonne**
Creep Feed	1.92	$1.63	$848.96
Starter	10.54	2.79	$264.71
Sow & Boar Feed	50.77	14.29	$281.47
Total Feed per Weaner	63.23	$18.71	
Feed per Sow & Boar	1080.00	$303.98	

Tree Fruit Farm Business Management Analysis

Statement of Revenues
Average - 10 Farms

	# Bushels	Total $'s	$/Total Bus.	% of Total
Fresh Apple Sales	22,343	$175,939	$3.85	62.72
U-Pick Apple Sales	169	1,477	0.03	0.53
Processed Apples	10,002	45,628	1.00	16.27
Juice/Cider Apples	13,223	29,784	0.65	10.62
Total Apples Sales	**45,737**	**$252,828**	**$5.53**	**90.14%**
Crop Insurance Income		$0	$0.00	0.00
Apple Assistance Programs		209	0.00	0.07
Other Gov't Assistance Programs		9,315	0.20	3.32
Misc. Apple Income		3,429	0.07	1.22
Other Apple Revenue		**$12,952**	**$0.28**	**4.62%**
Other Tree Fruits		$6,361	$0.14	2.27
Other Crops		2,882	0.06	1.03
Miscellaneous Income		5,471	0.12	1.95
Total Non-Apple Revenue		**$14,714**	**$0.32**	**5.25%**
Total Farm Revenue		**$280,494**	**$6.13**	**100.00%**

Statement of Expenses

	Total $'s	$'s Per Bushel	% of Total
Harvesting Labour	$48,073	$1.05	24.33
Other Labour	30,036	0.66	15.20
Spray: Herbicides	1,630	0.04	0.83
Insecticides	8,692	0.19	4.40
Fungicides	12,048	0.26	6.10
Other	4,533	0.10	2.29
Fertilizers & Lime	4,557	0.10	2.31
Containers & Bins	3,262	0.07	1.65
Rootstalk & Trees	1,657	0.04	0.84
New Orchard Expense	1,440	0.03	0.73
Bee Rental	272	0.01	0.14
Other Orchard Expenses	1,611	0.04	0.82
Fuel & Lubricants	4,448	0.10	2.25
Tractor & Machinery Repair	7,844	0.17	3.97
Truck & Vehicle Expense	2,754	0.06	1.39
Building & Bin Repair	6,219	0.14	3.15
Custom Work & Trucking	12,004	0.26	6.08
Specialized Services	1,305	0.03	0.66
Rental Expense	6,013	0.13	3.04
Office Expense	896	0.02	0.45
Insurance	2,570	0.06	1.30
Utilities	2,500	0.05	1.27
Crop Insurance	2,492	0.05	1.26
Fees & Licenses	1,684	0.04	0.85
Property Taxes	1,313	0.03	0.66
Interest Expense: Operating	2,131	0.05	1.08
Interest Expense: Term	6,252	0.14	3.16
Miscellaneous Expense	2,243	0.05	1.14
Total Apple Related Expenses	**$180,477**	**$3.95**	**91.34%**
Other Tree Fruits Expense	883	0.02	0.45
Other Crops Expense	1,001	0.02	0.51
Miscellaneous Non-Apple	2,696	0.06	1.36
Total Non-Apple Expense	**$4,580**	**$0.10**	**2.32%**
Total Cash Expenses	**$185,057**	**$4.05**	**93.66%**
Building Depreciation	1,815	0.04	0.92
Machinery & Equipment Depreciation	10,707	0.23	5.42
Total Depreciation	**$12,522**	**$0.27**	**6.34%**
Total Farm Expenses	**$197,579**	**$4.32**	**100.00%**

Income Summary

		Total $'s	$'s Per Bushel
Total Farm Revenue		$280,494.19	$6.13
Total Cash Expenses		$185,057.13	$4.05
Net Cash Income		**$95,437.06**	**$2.09**
Plus: Inventory Change, Supplies		532.50	0.01
Less: Depreciation Expense		12,522.35	0.27
Net Farm Income		**$83,447.21**	**$1.82**
1.	Less: Cost for Unpaid Family Labour	$3,546.15	0.08
	Less: Interest on Equity @ 6%	8,831.99	0.19
2.	Labour and Management Income	$71,069.07	$1.55

1. Unpaid family labour is charged at the farm rates for harvesting and other labour. Management labour was charged at $12 per hour.

2. Labour and Management Income represents the amount of income left the operator for his labour and management skills.

Net Cost of Production

Item		Total $'s	$'s Per Bushel
Total Cash Expenses		$185,057	$4.05
Plus: Other Apple Expenses:	Depreciation	$12,522	0.27
1.	Inventory Change (supplies)	533	0.01
2.	Interest on Equity	8,832	0.19
	Unpaid Family Labour	3,546	0.08
3.	Operator Labour	20,797	0.45
Total Expenses		**$231,287**	**$5.06**
Less: Non-Apple Income		$27,667	$0.60
Net Cost of Producing Apples		**$203,620**	**$4.45**
Net Return From Apples			
4. Total Apple Income		$252,828	$5.53
Less: Net Cost of Producing Apples		$203,620	$4.45
Net Return From Apples		**$49,208**	**$1.08**
Total Bushels of Apples Sold		45,741	1
Total Pounds of Apples Sold		1,921,130	42

1. Ending supplies inventory less beginning supplies inventory.
2. Interest on equity is calculated at 6%
3. Operator labour was charged at $12.75/hr.
4. Crop Insurance proceeds are included as Apple Income.

Balance Sheet at Book Values

	Beginning $'s	Ending $'s
Current Assets		
Cash	($8,983)	($8,208)
Apple Sales Receivable	40,768	69,848
Supplies	390	923
Other Current Assets	12,146	11,809
Total Current Assets	$44,321	$74,372
Term Assets		
Orchard Land	$81,145	$81,145
Other Land	42,248	42,448
Farm Buildings	26,374	29,112
Machinery & Equipment	49,716	51,017
Other Term Assets	52,215	62,862
Total Term Assets	$251,699	$266,584
TOTAL FARM ASSETS	$296,020	$340,956
Liabilities		
Current Liabilities	$53,439	$40,571
Term Liabilities	126,565	122,001
Total Liabilities	**$180,004**	**$162,572**
Owners' Equity	**$116,016**	**$178,384**

Financial Analysis

			2002
1.	**Liquidity:**		
	Current Ratio		1.83
	Working Capital	$	$33,800
2.	**Solvency:**		
	Percent Equity	%	52.3
	Debt to Equity Ratio		0.91
3.	**Profitability:**		
	Return on Assets	%	21.2
	Return on Equity	%	40.2
	Capital Turnover	Years	1.14
4.	**Financial Efficiency:**		
	Interest as of % of Revenue	%	2.99
	Disposable Income	$	$101,689

Land Use Report

		Acres
Orchard in Apples		74.99
Orchard in Pears		1.49
Orchard in Other Fruit		0.31
Total Orchard		76.79
Cropland and Pasture		45.58
Woodland and Other		241.60
Total Land		363.97
Orchard in Apples, Bearing		65.26
Orchard in Apples, Total		74.99
% of Apple Acreage Bearing		87.03%
Total Number of Trees		15,535
Total Number of Bearing Trees		12,151
Average Density on all Trees	Trees/Acre	207.16
Average Density on Bearing Trees	Trees/Acres	186.17
Average Age of Trees	Years	14.38

Apple Yields	Bushel/B. Acre	Bushel/Tree
Fresh Apples	344.94	1.85
Processing Apples	153.26	0.82
Cider/Juice Apples	202.61	1.09
Total	700.81	3.76

Production & Management Information

Sales Information - Total Apple Sales by Variety*

Variety	Average $ Received Per Bushel
MacIntosh	7.04
Cortland	6.61
Ida Red	4.57
Gravenstein	6.44
Red Delicious	9.51
Cox Orange	0.86
All Varieties	5.53

* Includes Fresh Sales, U-Pick and Processing.

Yield by Variety

Variety	Bushels Produced	Bushels Per Acre
MacIntosh	12,417	780
Cortland	4,873	549
Ida Red	4,163	991
Gravenstein	1,021	407
Red Delicious	1,722	612
Northern Spy	2,738	421